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Symbiosis between algae and sponges.—Two new species of red algae have been described by Madame WEBER VAN BOSSE²⁴ as belonging to the genus *Thamnoclonium* and living in symbiosis with a sponge which forms a continuous layer over the flattened and branching thallus of the plants. In the sponge are found imbedded small branches of the algae and also a series of filaments that are apparently epidermal outgrowths of the plant, but whose nature and origin could not be definitely determined on account of the scantiness of the material which was collected on some East Indian islands. The character of the relationship between the two symbionts remains to be determined.—G. D. FULLER.

Flora of New Guinea.—A volume of the botanical results of the Dutch scientific exploration of New Guinea during 1912 and 1913 has appeared.²⁵ Previous parts of the botanical report on New Guinea were reviewed in this journal.²⁶ The present part includes the Orchidaceae by J. J. SMITH. The species number 151, included in 41 genera, 5 of the species being described as new. By far the largest genus is *Dendrobium*, with 52 species, *Bulbophyllum* being next with 24 species. The present contribution brings together previous publications of SMITH, who is credited with 130 of the species and 3 of the genera. In *Dendrobium*, SMITH has described 47 of the 52 species.

Another volume of the botanical results of the Dutch scientific exploration of New Guinea during 1907 and 1909 has also appeared.²⁷ The preceding part was published in 1912.²⁸ In the present part the collaborators are HANS HALLIER and TH. VALETON. Altogether 9 families are presented, all monocotyledons, including 25 genera and 113 species, 62 of which are new. Most of the contribution consists of the presentation of Zingiberaceae by VALETON, including 10 genera and 92 species (56 new). The large genera are *Alpinia*, with 35 species (22 new), and *Riedelia*, with 28 species (21 new).—J. M. C.

A toxin from Rhizopus.—BLAKESLEE and GORTNER²⁹ have announced the discovery of a toxin produced by *Rhizopus nigricans*. The expressed juice from aerial filaments caused almost instant death when injected intravenously into rabbits. Since this fungus has a very wide distribution, and is almost

²⁴ WEBER VAN BOSSE, Madame A., Sur deux nouveaux cas de symbiose entre algues et éponges. Ann. Jard. Bot. Buitenzorg. Suppl. 32: 587-594. 1910.

²⁵ Nova Guinea. Résultats de l'expédition scientifique Néerlandaise à la Nouvelle-Guinée en 1912 et 1913 sous les auspices de A. FRANSSEN HERDERSHEE. Vol. XII. Botanique. Livraison IV. 4to. pp. 1-108. pls. 1-28. Leide: E. J. Brill. 1913.

²⁶ BOT. GAZ. 49:464. 1910; also 55:462. 1913.

²⁷ Nova Guinea. Résultats de l'expédition scientifique Néerlandaise à la Nouvelle-Guinée en 1907 et 1909 sous les auspices de Dr. H. A. LORENTZ. Vol. VIII. Botanique. Livraison V. 4to. pp. 899-988. pls. 160-179. Leide: E. J. Brill. 1913.

²⁸ BOT. GAZ. 55:462. 1913.

²⁹ BLAKESLEE, A. F., and GORTNER, ROSS AKEN, On the occurrence of a toxin in juice expressed from the bread mould, *Rhizopus nigricans* (*Mucor stolonifer*). Biochem. Bull. 2:542-544. 1913.

certain to infect starchy food under suitable moisture conditions, the suspicion is suggested that it may be related to certain destructive diseases of stock, such as pellagra ("corn-stalk disease"). Experiments are being conducted to discover the nature of the toxin and its possible relation to such diseases.—J. M. C.

A new form of Juglans.—BABCOCK³⁰ has investigated a new form of *Juglans californica* and described it as var. *quercina*, on account of the resemblance of its leaves to those of an oak. The new form has appeared on seven separate occasions among seedlings of at least three different trees of *J. californica*. Three working hypotheses were tested experimentally, the conclusions being that the form is not a hybrid of *J. californica* with *Quercus agrifolia* or some other oak; that it did not originate in certain teratological flowers that occur; and that in all probability it is a mutant.—J. M. C.

Vascular anatomy of Platycerium.—Miss ALLISON³¹ has investigated the vascular anatomy of the rootstock of three species of *Platycerium*, uncovering a very unexpected complexity. The vascular cylinder is a complicated poly-stele, and in the largest form studied (*P. aethiopicum*) there are medullary strands also. She concludes that in the genus there is a progression from a comparatively simple type to a more complicated one. This anatomical structure certainly suggests a comparison with the Marattiaceae and the *Pteris*-like forms.—J. M. C.

Mosses of New Zealand.—DIXON³² has begun a publication of a series of studies of the mosses of New Zealand, especially with reference to the herbarium of ROBERT BROWN at Christchurch. The first part contains a revision of the species of *Dicranoloma*, 16 species being recognized, 5 of which are described as new. These species have heretofore been included under *Dicranum*, and DIXON follows RENAULD's treatment of this group as a separate genus.—J. M. C.

Medullosa pusilla.—In his *Studies in fossil botany* (1909), SCOTT referred to a very small *Medullosa* closely resembling the well known *M. anglica* except in size. He named it provisionally *M. pusilla*, and now has given a further account, with illustrations.³³ Further study shows that it differs in no important respect from *M. anglica*, and that its chief interest probably lies in the fact that it is the smallest *Medullosa* on record.—J. M. C.

³⁰ BABCOCK, ERNEST B., Studies in *Juglans* I: Study of a new form of *Juglans californica* Watson. Univ. Calif. Publ. Agric. Sci. 2:1-46. pls. 1-12. 1913.

³¹ ALLISON, HARRIET E., On the vascular anatomy of the rhizome of *Platycerium*. New. Phytol. 12:311-321. figs. 5. 1913.

³² DIXON, H. N., Studies in the bryology of New Zealand, with special reference to the herbarium of Robert Brown. Part I. New Zealand Inst. Bull. no. 3. pp. 29. pls. 1-4. 1913.

³³ SCOTT, D. H., On *Medullosa pusilla*. Proc. Roy. Soc. London B 87:221-228. pl. 13. figs. 2. 1914.